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THE NEW ENGLAND BOTANICAL CLUB

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SOME MAINE RUBI. THE BLACKBERRIES OF THE KENNEBUNKS AND WELLS,— II.

W. H. Blanchard.

Ten species and one variety are considered in this paper and the *Hispidus* and *Setosus* classes must be left for a third paper. The first six of the following species are erect "high" blackberries belonging to four distinct classes two of which are new; and the remaining four are recurving and tipping, forming three equally distinct new classes.

* Erect Blackberries, recurving slightly or not at all; never tipping.

+– The *Nigrobaccus* class. Inflorescence a long tapering open raceme.

Rubus nigrobaccus, Bailey. This is abundant and fruits well in parts of Wells, but is generally occasional only, though it occurs in all situations down to the edge of the ocean. Wherever found it has plainly the distinguishing characteristics of the species, and does not seem to intergrade with or into anything else as Prof. L. H. Bailey has taught. It is very pubescent and hairy with stalked glands on all parts often even on the surfaces of the leaves. The new canes have strong furrowed stems, often branched, with stout straight prickles set on the ridges at a right angle, and 5-foliate light yellow-green leaves, the leaflets mostly ovate and long-stalked. The old canes are pyramidal in outline, the leaf branches closely resembling new canes. The inflorescence is a long tapering raceme nearly leafless, very loose and open, the pedicels set at a great angle to the axis. The petals are long and narrow, the fruit long and tapering; a good fruit having from 60 to 100 small drupelets each about $\frac{1}{8}$ in. in diameter; very aromatic but very seedy.

Rubus orarius, n. sp. Plants large and very erect, pyramidal in outline with stout furrowed stems. Glabrous or somewhat pubescent; glandless or somewhat glandular on the inflorescence. Leaflets broad; fruit large and useful, in large open racemes.

New canes. Stems strong, erect, 3 to 6 feet high, dark red, often branched, glabrous and glandless, angled and deeply furrowed. Prickles few, 3 to 5 to the inch of stem, short, stout and strong, straight, set perpendicular to it and on its sharp angles. Leaves large often 9 in. long and 8 in. wide, 5-foliate, rather thick; dark yellow-green, glabrous or somewhat hairy on the upper surface, and glabrous or more or less finely pubescent and lighter beneath. Leaflets broadly oval or ovate, long-stalked, outline entire, taper-pointed, finely and doubly serrate-dentate; the middle one broadest often slightly cordate, the side ones narrower and rounded at the base; the basal ones smaller and broadly cuneate at the base. Petiole and petiolules large, grooved more or less, pubescent; prickles few, short and hooked; the petiolule of the middle leaflet 1½ in. long, the side ones one-half as long and the basal ones ⅛ in. long.

Old canes. Little changed, prickles intact. Cane pyramidal in outline, the new growth consisting of nearly leafless racemes at the upper part of the stem and long leafy branches below resembling new canes, generally one from each old leaf axil. Axis of long leaf-branches zigzag, terete, pubescent, prickles few and straight. Leaves 3-foliate or some of the outer 5-foliate resembling those on new canes. Racemes 3 to 5 in. long; axis straight, stout, pubescent, glandless or with few sometimes many stalked glands; prickles few, small and straight; pedicels similar, slender, 1 in. long, set at a great angle and subtended by small bracts; leaves two or three, very small, trifoliate and unifoliate. Flowers appearing the last week in June, large and showy; 1¼ in. broad; the petals oblong-oval two thirds as wide as long; sepals wide, mucronate or acuminate, reflexed. Fruit beginning to ripen Aug. 5 and continuing a long time, broad-cylindric, drupelets large, $\frac{3}{16}$ in. in diameter or sometimes but ⅛ inch. Two measured and counted: ½ in. long by ⅜ in. broad, 23 drupelets; ⅜ in. high and ½ in. broad, 43 drupelets. Edible and valuable.

Type station Cape Porpoise post-office and from thence up the Biddeford road in Kennebunkport, Maine. Quite variable and abundant in Wells, Kennebunk and Kennebunkport. Moist or dry ground, in open sun or light shade.

This broad-leaved blackberry is well distinguished from *R. nigrobaccus* by its broad petals, short fruit, dark yellow-green leaves and in its being nearly or entirely lacking in pubescence and stalked glands. It is the species that furnishes most of the fruit actually picked where *R. nigrobaccus* is scarce.

+ + The *Argutus* class. Inflorescence a short raceme with short stout unequal pedicels.

Rubus amnicolus n. sp. Plants erect, tall, recurved at the top, glandless, well-armed, pubescent. Fruit large, cylindrical; drupelets large. Inflorescence a raceme leafy at the base.

New canes. Stems stout, erect, recurved above, 4 to 5 feet high, 6 to 8 feet long, reddish, glabrous and glandless, well angled and furrowed. Prickles strong, straight, needle-pointed, $\frac{3}{16}$ in. long, 6 to 10 to the inch of stem, set at a right angle to the stem and on its angles only. Leaves large, 8 in. long by 7 in. wide, 5-foliate, quite thick; yellow-green with appressed hairs but smooth on the upper surface, and lighter and very softly pubescent beneath. Leaflets stalked, broad-oval, outline entire, taper-pointed, ciliate, finely somewhat doubly serrate-dentate; the middle leaflet one-half as wide as long, often wider, rounded or slightly cordate at the base; the side ones nearly one-half as wide as long, broad at the base; and the basal ones similar in shape or broad-pointed at the base and smaller. Petiole and petiolules stout, glandless, grooved, thinly pubescent; prickles numerous, strong, hooked; the petiolule of the middle leaflet averaging 1 in. long, the side ones one-half as long, the basal leaflets on very short stalks.

Old canes. Erect, mostly killed back, often badly, prickles intact. Normally pyramidal in outline, one bud developing from each old leaf axil. New growth on the upper part of the cane consisting of a short close raceme at the end of an axis 3 to 6 in. long, the shorter set the farther up the cane; the lower part of the cane occupied by leafy branches resembling the new canes, the basal ones 1 ft. or more long, the upper ones 6 in. Axis of fruit branches stout, straight, terete, glandless, very pubescent or woolly; prickles few and small, strong and hooked; the racemes short, close; pedicels short, stout, pubescent, glandless, set at a great angle to the axis, subtended by small bracts; the leaves small and few, trifoliate with nearly oblong leaflets. Axis of leaf branches nearly terete, stout, nearly straight, pubescent; prickles few, straight and small; leaves very similar in color, texture, pubescence, serration and form to those on new canes, mostly quinate, a few at the base of the branch trifoliate with wide leaflets, petioles and petiolules very pubescent; mostly tipped with a little loose inflorescence. New growth on badly killed-back stems consisting of long leaf branches tipped with late flowers, several from each old leaf axil giving the cane a peculiar form. Flowers rather large, $1\frac{1}{8}$ to $1\frac{1}{4}$ in. broad, petals oval to oblong, $\frac{5}{8}$ in. long and rather more than one-half as wide as long, appearing the last of June, those on killed-back branches continuing till the middle of July. Fruit short-cylindric, about $\frac{1}{2}$ in. high and broad, of 15 to 20 large drupelets. Ripe early in August.

Type stations: The Rosin dump below the Leatheroid shop and the sand lot above Hope Cemetery in Kennebunk village, Maine. Abundant on the meadows of the Mousam river below the village and occurring in other places. Open sun, dry and moist ground.

This species is well distinguished from *R. nigrobaccus* and *R. orarius* by its long recurving stem, lack of glands, narrow leaflets

and close racemes ending more or less leafy branches. It seems to prefer localities not far from streams and winter-kills badly, sending out an abundance of long leafy branches tipped with late flowers. It bore abundantly in 1904 but in 1905 the crop was a failure.

+ + + Inflorescence a short raceme with slender equal pedicels.

Rubus glandicaulis, n. sp. Plants very erect, pubescent, and all parts except the leaf blades thickly covered with stalked glands. Inflorescence a very regular raceme with long thread-like pedicels. Fruit cylindrical with rather small drupelets.

New canes. Stems strong, thick, very erect, 3 to 6 feet high, or often dwarfish, dark red, often branched, remarkably glandular, 5-angled and slightly furrowed. Prickles ⅛ in. long, 10 to 15 to the inch of stem, straight, backward slant slight, set in lines on the angles. Leaves large on strong plants 8 in. long by 7 in. wide, average smaller, nearly coriaceous when mature, rather thin; on the upper surface shining dark yellow-green with appressed hairs but very smooth to the touch; velvety beneath with abundant short pubescence. Leaflets nearly oval, the three upper stalked, outline entire, long taper-pointed; finely and slightly doubly serrate and serrate-dentate; the middle one broad, rounded at the base, sometimes ovate, rarely nearly cordate, two thirds as wide as long; the side ones oval, twice as long as wide; the basal leaflets similar in shape but smaller. Petiole and petiolules yellow, stout, grooved; prickles stout, hooked, numerous, in lines; covered thickly with stalked glands; proper pubescence little or none; the petiolule of the middle leaflet 1 in. long, the side ones ½ in. long, the basal leaflets sessile.

Old canes. Erect as ever, prickles and stalked glands often much broken. Normally pyramidal in outline, the second year's growth consisting of nearly naked racemes at the top of the cane, these succeeded by racemes leafy at the base, and below these long leafy branches often destitute of inflorescence and resembling new canes. Upper racemes 4 to 6 in. long; axis straight, terete, very pubescent and glandular; prickles few straight and slender; pedicels 8 to 16, slender, thread-like, very pubescent and glandular, set at an angle of about 45° to the axis, 1 in. long, subtended by small bracts; at the base of the raceme a few small trifoliate and unifoliate leaves, the leaflets about 1 in. long. The lowest branches often over 1 ft. long; axis nearly terete, yellow, zigzag, pubescent, glandular; prickles few and weak. Leaves 3-foliate, the leaflets broad-oval; those at the end of the branch 5-foliate, leaflets narrow; petiole and petiolules slender, pubescent and glandular, prickles slender; in color, texture, pubescence and serration similar to those on new canes. Intermediate branches increasing regularly in length and leafiness downwards, the amount of inflorescence decreasing slightly, the leaflets on these branches long and narrow. Normally one axis from each old leaf-

axil but often several. Flowers 1⅛ to 1¼ in. broad, petals oval from $\frac{9}{16}$ in. long by $\frac{5}{16}$ in. wide to ⅝ in. long by $\frac{5}{16}$ in. wide; appearing late in June and continuing on the lower branches till the middle of July. Fruit ripe Aug. 8, continuing to ripen in favorable places till Sept. 1; cylindrical, regular, of good size; drupelets rather small from ⅛ to $\frac{3}{16}$ in. in diameter. Four out of many counted and measured: $\frac{11}{16}$ in. high by $\frac{7}{16}$ in. broad, 40 drupelets each from 2½ to 3 sixteenths in. in diameter; $\frac{11}{16}$ in. by $\frac{7}{16}$ in., 56 drupelets each ⅛ inch; $\frac{11}{16}$ in. by $\frac{8}{16}$ in., 43 drupelets each 2 to 2½ sixteenths inches; $\frac{11}{16}$ in. by $\frac{8}{16}$ in., 36 drupelets. Very edible.

Type station on the railroad and highway from the shoe-shop to the depot in Kennebunk, Maine. Abundant in Wells, Kennebunk and Kennebunkport and especially abundant in the road and adjoining fields from Cape Porpoise to Kennebunkport village. Dry ground in open sun and light shade.

This very glandular species can be distinguished from *R. nigrobaccus* at a glance by its narrow leaflets, smooth and shining above, and its slender equal pedicels set at a small angle to the axis.

Rubus amabilis, n. sp. Plants quite erect, nearly unarmed, glandless, very glabrous. Inflorescence a very regular raceme with short thread-like pedicels. Fruit cylindrical, drupelets large or small.

New canes. Stems stout, strong, very erect, soft, 3 to 5 feet high, often a dwarf, reddish, glabrous and glandless, very smooth, 5-angled and furrowed. Prickles very small and slender, straight, hardly noticeable, 5 to 8 to the inch of stem, on its angles only. Leaves large, 8 in. long by 7 in. wide, 5-foliate, rather thick; dark green with a few appressed hairs when young, then glabrous and very smooth on the upper surface; lighter green, glabrous and smooth beneath. Leaflets narrowly obovate or sometimes oval rarely ovate, the upper ones stalked, outline entire, long taper-pointed, finely slightly doubly serrate and serrate-dentate; the middle one broadest, nearly one-half as wide as long, narrow but rounded at the base; the side ones three times as long as wide, cuneate at the base; the basal leaflets similar in shape but smaller. Petiole and petiolules rather stout, grooved, glabrous, glandless, unarmed, prickles minute or wanting; the petiolule of the middle leaflet 1 in. long, the side ones one-third as long, the basal leaflets sessile.

Old canes. Erect as ever, prickles mostly wanting, soft, reddish. Generally pyramidal in outline, the second year's growth consisting of short leafless or nearly leafless racemes or sometimes a short leaf branch at the top of the cane, and long leaf branches resembling new canes at its base, with polymorphous growth between; one from the axil of each old leaf except as described below. The upper racemes 3 or 4 in. long, glandless, axis straight, terete, prickles minute or wanting, finely pubescent with 12 to 30 slender, thread-like, finely-pubescent pedicels ½ in. long, set at an angle of 45° to it, subtended

by broad conspicuous bracts, leafless or with one or two small trifoliate or unifoliate glabrous leaves at its base. The lowest branches often over 16 in. long, axis nearly terete, yellow, zigzag, glabrous and very smooth; 3-foliate, the leaflets very broad-oval, long-pointed, thin, rather coarsely serrate-dentate, the outer leaves often quinate. Intermediate growth consisting of several forms mixed: rather long racemes similar to the upper but with pedicels 1 in. long and more leaves; long leafy branches tipped with similar racemes; short leaf branches bare of inflorescence; and short naked racemes subtended by one of the latter two forms; the leaves mostly trifoliate with long obovate pointed leaflets, or broad unifoliate leaves, all dark green, glabrous and coarsely serrate-dentate. Flowers rather large, $1\frac{1}{4}$ to $1\frac{1}{2}$ in. broad; petals $\frac{8}{16}$ to $\frac{11}{16}$ in. long and one-half as wide or a little wider, oval or abruptly narrowed at the ends; sepals gradually narrowed to a long point, glabrous outside, woolly inside; opening June 25–July 5, and continuing on inflorescence-tipped branches till July 15. Fruit cylindrical, very variable in size, the drupelets from $\frac{2}{16}$ to $\frac{3}{16}$ in. in diameter. Six measured and counted: $\frac{11}{16}$ in. high by $\frac{8}{16}$ in. broad, 35 drupelets; $\frac{11}{16}$ in. by $\frac{9}{16}$ in., 30 drupelets; $\frac{8}{16}$ in. by $\frac{7}{16}$ in., 18 drupelets; $\frac{12}{16}$ in. by $\frac{9}{16}$ in., 37 drupelets; $\frac{3}{8}$ in. by $\frac{3}{8}$ in., 10 drupelets; $\frac{7}{16}$ in. by $\frac{6}{16}$ in., 22 drupelets. Ripe Aug. 21 and continuing to ripen till Sept. 1 on late flowering branches. Very edible, productive. Perhaps worthy of cultivation.

Type stations: Grove depot, Kennebunk, Maine; Arundel depot, Kennebunkport; Kennebunk village on the highway from the shoe-shop to the depot. Abundant in Wells, Kennebunk and Kennebunkport. Also in North Berwick. Thrives in pastures or hedges, moist or dry places, open sun or light shade.

This species has a resemblance to *R. glandicaulis*, but is nearly unarmed, is quite glandless and glabrous, and has slightly obovate leaves and shorter pedicels. It has no noticeable resemblance to *R. Canadensis*, L. except in its being nearly unarmed, dark green, glabrous and glandless, while the shape of the leaflets, height of plant, form of inflorescence and fruiting season are entirely different.

+– +– +– +– Inflorescence a short raceme ending a leafy branch.

Rubus peculiaris, n. sp. Plants erect, recurving slightly, very glabrous, glandless, armed with very numerous prickles. Inflorescence a raceme ending a leafy branch. Fruit irregularly globose, drupelets large. Leaves thick, leathery.

New canes. Stems stout, strong, erect but somewhat recurved above, $2\frac{1}{2}$ to 4 ft. high, often a dwarf, reddish, glabrous, glandless, 5-angled, not furrowed. Prickles very numerous, $\frac{1}{16}$ to $\frac{1}{8}$ in. long, 50 to the inch of stem, strong bristle-prickles, not confined to the angles, straight with a slight backward slant. Leaves large, 8 in.

long and 7 in. wide, quite thick, leathery; deep dark green, perfectly glabrous and very smooth on the upper surface; lighter but not more yellow and very glabrous and smooth beneath. Sometimes a few appressed hairs above and on the veins beneath. Leaflets narrowly oval, often appearing obovate, cuneate at the base, the upper ones stalked, outline entire, long taper-pointed, shallowly sometimes doubly serrate or slightly serrate-dentate; the middle one twice as long as wide, the others about three times as long as wide. Petiole and petiolules stout, grooved, glabrous, glandless, or the petiolules slightly pubescent, prickles numerous, very slender and hooked, the petiolule of the middle leaflet $\frac{3}{4}$ in. long, the side ones one-third as long, and the basal leaflets nearly sessile.

Old canes. Erect as ever, brown, prickles not intact, points gone, stem often nearly smooth. New growth consisting entirely of leafy fruit branches, 3 in. long at the top of the cane and 10 in. long at the base each tipped with inflorescence. Axis irregularly angled, zigzag, glabrous with a few very small and very weak prickles, glandless. Leaves few, 3-foliate or some upper ones unifoliate; the leaflets long, narrow, pointed, cuneate and nearly entire at the base, serrate or serrate-dentate, rather thick, dark green and glabrous above, lighter green beneath, the middle one short-stalked, the unifoliate leaves similar, or often very broad and deeply 3-lobed. One strong branch from each old leaf axil, or nearly as often especially below, two or more slender ones with less inflorescence, generally very zigzag, one often blossoming late; the whole second year's growth angular, irregular, mixed and unique. Inflorescence glandless, of rather regular racemes, 1 to 2 in. long, with finely pubescent axis and 8 to 12 short, stout, finely pubescent pedicels set at varying angles to the axis and subtended by large, conspicuous and leaflike bracts. Also much smaller and irregular inflorescence on lower branches and secondary branches above. Flowers, appearing the first week in July and continuing two weeks on late branches, rather large, $1\frac{1}{8}$ to $1\frac{1}{4}$ in. broad, petals $\frac{5}{8}$ in. long by $\frac{5}{16}$ in. wide, oval, oblong-oval, or obovate. Fruit ripe Aug. 15, irregularly globose, composed of 3 to 20 large drupelets each $\frac{3}{16}$ in. in diameter or often larger, a nice fruit being $9\frac{1}{2}$ sixteenths in. in diameter with 21 drupelets.

Type stations: Saco Road Methodist Church at Arundel depot, Kennebunkport, Maine, and on Main Street, Kennebunkport village at the guideboard to Cape Porpoise by the sea road. Abundant in Kennebunk and Kennebunkport. Dry ground, open sun or light shade.

This species as summarized in the opening paragraph has little resemblance to any other species of high blackberry and forms a class by itself.

* * Canes recurving and tipping.

+ Leaves pubescent; stems little prostrate.

Rubus Arundelanus, n. sp. Plants very pubescent with occasional stalked glands on the inflorescence, the stems nearly terete, hard, recurving and tipping. Leaves thick, the margins somewhat plicate; those on old canes very irregular in form.

New canes. Stems thick, glandless and glabrous, very smooth, nearly terete, reddish green, hard, erect, 2 to 4 feet high, recurving, often tipping, frequently branched. Prickles rather slender, strong, straight, slanted slightly backward, $\frac{1}{8}$ to $\frac{3}{16}$ in. long, 5 to 10 to the inch of stem, set in lines on the angles of the stem or pith. Leaves 5 to 7 in. long and wide, 5-foliate, thick; light yellow-green with numerous hairs and rough on the upper surface, lighter with copious long pubescence and very velvety beneath. Leaflets broad-oval or rhomboidal, overlapping, outline wavy or slightly incised, margins somewhat plicate, taper-pointed, dentate or serrate-dentate, the teeth narrow and long with long points, the central tooth of the shallow lobes very long; the middle leaflet very broad, often short-ovate approaching orbicular, with sometimes a tendency to divide into three leaflets, broadly rounded sometimes nearly cordate at the base; the side ones broad-oval, oblique-angled at the base; the basal ones oval, broadly cuneate. Petiole and petiolules large, faintly grooved, very hairy-pubescent, glandless, prickles strong often large, recurved; the petiolule of the middle leaflet generally less than an inch long, the side ones about one-third as long, and the basal leaflets sessile.

Old canes. Stems reddish green, strong, hard to cut, prickles intact. New growth consisting of leafy branches from 3 to 10 in. long tipped with inflorescence, or rarely a pure leaf branch, regularly graded, the short ones terminal, generally one from each old leaf-axil. Axis of branches straight or often zigzag, angled, copiously pubescent with occasional stalked glands; prickles numerous, rather large, strong and somewhat hooked; leaves 3-foliate, the upper unifoliate, thick; light yellow-green with some hairs on the upper surface, lighter and very pubescent beneath; leaflets varying greatly in size and shape, often very broad, irregularly and shallowly incised, coarsely dentate or serrate toward the base, the unifoliate narrow or often broad and deeply incised. Inflorescence on a short axis, cymose-corymbose or cymose-racemose; pedicels very pubescent with occasionally a stalked gland, 6 or 8 set at a small angle or erect, and an erect one from the axil of each lower leaf, subtended by unifoliate leaves and narrow bracts, or some by nothing. Flowers appearing about July 1 large, $1\frac{1}{4}$ to $1\frac{1}{2}$ in. broad; petals broadly oval, one-half as wide as long; sepals broad, very pubescent, mucronate or acuminate. Fruit ripening about Aug. 10 and continuing in fruit about two weeks, globose, $\frac{1}{2}$ in. in diameter, drupelets large, $\frac{3}{16}$ in. in diameter.

Type stations: The field ten rods west of the Casino in Kennebunkport village, Maine; in the road north of Cape Porpoise village; and on the ledges around the Old Orchard House at Old Orchard. Also several other stations some very large in Kennebunk and Kennebunkport. Open places, rich or poor or on rocks.

This species resembles the *Recurvans* class in the size and shape of the new cane, but has a hard stem and strong prickles while the leaves are very hairy and pubescent, the leaflets overlapping, thick and somewhat plicate on the margins. This and the form following may well be considered a distinct class.

Rubus Jeckylanus, n. sp. Plants very pubescent with occasional stalked glands on the inflorescence, stems nearly terete, hard, recurving and tipping. Leaves thick, leaflets broad, branches of old canes very leafy.

New canes. Stems thick hard and woody, smooth, glabrous and glandless, nearly terete, 2 to 4 feet high, erect at first then recurving, often tipping, sometimes branched. Prickles slender, strong, $\frac{1}{8}$ in. to $\frac{3}{16}$ in. long, slanted slightly backward, about 8 to the inch of stem, set in lines over the angles of the pentagonal pith or on the slight angles of the stem. Leaves 5-foliate, 5 to 7 in. long and wide, thick; yellow-green with appressed hairs but smooth on the upper surface; and whiter and very velvety with abundant long pubescence beneath. Leaflets broadly oval or ovate, greatly overlapping, only the middle leaflets noticeably stalked, outline entire, taper-pointed, singly dentate or serrate-dentate, the teeth long-pointed; the middle leaflet broadly ovate and cordate; the side ones broad-oval, oblique-angled at the base; the basal ones very broad and wide-angled at the base; the leaflets all being about two-thirds as wide as long. Petiole and petiolules large, grooved, very villous-pubescent, glandless; prickles numerous, strong and hooked; the petiolule of the middle leaflet less than 1 in. long, the side ones about $\frac{1}{8}$ in. long, the basal leaflets sessile.

Old canes. Stems hard to cut, reddish green, prickles intact. Second year's growth polymorphous, consisting of long leafy branches often 12 to 18 in. long normally growing near the base of the cane sometimes tipped with inflorescence; short nearly or quite leafless inflorescences from 1 to 3 in. long normally borne toward the end of the cane; and leafy inflorescences situated between the two other kinds; but these three forms and others not described often much mixed, and any form occurring frequently at any point; generally one from the axil of each old leaf, but frequently the first and last occur together. Axis of leafy branch straight or zigzag, angled, pubescent; prickles small, strong, slightly hooked; leaves 3-foliate, large, leaflets broad, mostly oval, the middle leaflet very short-stalked, resembling those on new canes in other respects. Axis of leafy fruit branches thick, straight or zigzag, very villous-pubescent, glandless; prickles small and somewhat hooked; leaves numerous, trifoliate, the upper unifoliate; in color, texture and pubescence like those on new canes; the middle leaflet stalked; leaflets broad-oval, finely or coarsely serrate-dentate, the unifoliate leaves very broad often approaching orbicular; inflorescence short, cymose-corymbose, pedicels very pubescent with often a few stalked glands, 6 or 8, short, set at a

small angle to the axis, subtended by unifoliate leaves and small bracts. The short inflorescences quite similar. Flowers appearing July 1, from 1 to 1¼ in. broad; petals oblong-oval, two-thirds as wide as long; sepals broad, very pubescent, mucronate or acuminate. Fruit ripening about Aug. 10, globose, drupelets large, maturing this year but little and that very poor.

Type stations: near Arundel railroad station in Kennebunkport, Maine, and Grand View Hill west of the Casino in Kennebunkport village. Frequent throughout the village and especially abundant along the shore from Spouting Rock to Cape Arundel. Also at the Granite Quarry in Biddeford. Open places in dry or rich ground, dwarf or large.

The new canes resemble those of *R. Arundelanus*, but the old ones are unique in their polymorphous and mixed characteristics.

+ + Leaves glabrous; stems much prostrate.

Rubus biformispinus, n. sp. Plants decumbent at length trailing, with stems thick at the base, glabrous but very glandular, and with very broad leaflets and distinct primary and secondary prickles, very savage to touch.

New canes. Stems thick and erect at the base, angled but not furrowed, soon decumbent and then trailing, tipping in September; trailing over bushes, fences or on the ground; glabrous but very glandular; dark red on the upper side and green beneath. Prickles of two kinds: primary ones strong, $\frac{3}{16}$ in. long, with stout base, 5 to 10 to the inch of stem, straight, on the angles, with slight backward slant or none; secondary prickles short, strong, of varying lengths set at random, the smallest tipped with glands. Glands numerous, their stalks unequal in length, tapering. Leaves about 6 in. long and wide, 5-foliate, rather thick; dark green, glabrous and slightly shining on the upper surface; lighter green but not yellowish, and glabrous beneath. Leaflets very broad, oblong-oval, taper-pointed, stalked, outline entire; finely, sharply and mostly singly serrate-dentate; the middle one broadest often nearly orbicular and slightly cordate near the petiolule; the side ones a little narrower, oblong-oval or rhomboidal, more narrowly rounded at the base; the basal ones similar in shape but smaller and more narrowly rounded at the base. Petiole and petiolules stout, strong, grooved; dark red on the upper side, green-yellow beneath; glabrous; prickles strong and hooked continued on the midribs; the abundant secondary prickles and glandular covering like that of the stem; the petiolule of the middle leaflet about 1 in. long, the side ones one-third as long, and the basal leaflets short stalked but not sessile.

Old canes. Stem faded, primary prickles intact, secondary ones considerably impaired; in favorable places the old leaves often remaining. New growth entirely of leafy horizontal fruit branches well

graded in length; those near the root 1 foot long, the terminal ones 2 to 4 in., nearly pure racemes. Axis of terminal growth nearly straight, angled, hairy, glanded hairs abundant; prickles numerous, strong and slightly hooked; leaves one or two trifoliate or the outer unifoliate, thick, shining and glabrous; leaflets broad-oval, pointed at each end, coarsely serrate-dentate; petiole glanded, prickles recurved, the middle leaflet stalked; inflorescence a short raceme, pedicels 8 to 12, about $\frac{5}{8}$ in. long, set at an angle of 45°, rather thick, with numerous glands, subtended by rather large bracts. Axis of long branches straight or zigzag, terete; prickles small strong and hooked; glands numerous or scanty. Leaves large, 3-foliate, resembling those on new canes in color, texture, serration and pubescence; leaflets broad like those on new canes, the side ones sessile and very broad with slight lobing on the lower side. Inflorescence shorter, less regular or nearly wanting. Flowers appearing about July 5 on the main inflorescence, but much later on the long leafy branches, about 1 in. broad or often some less; petals very broad, oblong or approaching orbicular; sepals broad, bright green, mucronate; glabrous and glandless outside, pubescent inside on the proper inflorescence; but narrow and often leafy-tipped on long leafy branches. Fruit ripening normally the middle of August, globose, $\frac{3}{8}$ to $\frac{7}{16}$ in. in diameter, drupelets 11 to 16, about $\frac{3}{16}$ in. in diameter, but little maturing this year.

Type station near the guide-board at the intersection of Main St. and the ocean road to Cape Porpoise in Kennebunkport village, Maine, abundant here and down the Cape Porpoise road for a mile and frequent throughout the entire village. Open sun in dry ground.

This species is remarkable in many ways and must be put in a class by itself.

Rubus multiformis, n. sp. Plants with thick stems and very long, wide-branched canes, decumbent or erect at first, then creeping a long distance on the ground and tipping. Leaves often skeleton-like; the leaflets being so long, narrow and long-stalked.

New canes. Stems thick and erect at the base, 2 to 4 feet high, angled and furrowed, green-brown, glabrous, glanded or unglanded; soon recurved, trailing on bushes, fences or on the ground, tipping in September, 6 to 12 feet long with numerous long branches. Prickles rather short, on the angles, about 5 to the inch of stem, slanted backward; the glandular form with small secondary prickles. Glands on slender stalks, numerous on some plants, wanting on others. Leaves skeleton-like, 7 in. long and 6 in. wide, 5-foliate, thin; glabrous or with a few appressed hairs and light green often shining on the upper surface; glabrous, rarely slightly pubescent beneath. Leaflets narrow, long-oval, long-stalked, long taper-pointed, outline entire, finely slightly doubly serrate-dentate; the middle one widest, the blade nearly one-half as wide as long and rounded at the base; the side ones

much narrower, cuneate and slightly rounded at the base; the basal ones smaller and more sharply cuneate. Petiole and petiolules large, strong, glabrous, glanded on some, faintly grooved, prickles strong and hooked; the petiolule of the middle leaflet over 1 in. long, the side ones over one-half as long, the basal ones short-stalked but never sessile.

Old canes. Stems brown, prickles intact. New growth consisting of erect, leafy fruit branches, or stemlets, 5 in. to 3 feet high, well graded from the short terminal ones to the tall ones on the thick part of the stem, usually one from each old leaf axil. Axis of short branches angled, glabrous, or on some glanded, prickles minute; leaves 3-foliate, the upper unifoliate, pointed at each end, resembling those on new canes in other respects; inflorescence a broad raceme, pedicels 8 to 12, nearly glabrous, set at a great angle to the axis, and subtended by narrow unifoliate leaves and long narrow bracts. Long branches appearing like new canes; axis straight or zigzag; leaves 5-foliate, in all respects like those on new canes; the pedicels subtended mostly by narrow unifoliate leaves. Flowers appearing July 1 and continuing on the long branches for two or three weeks, about 1 in. broad, showy; the petals oblong-oval, one-half as wide as long; sepals broad, mucronate or pointed. Fruit beginning to ripen Aug. 5 and continuing to ripen through the month, short-cylindric, composed of large drupelets $\frac{3}{16}$ in. in diameter. Three measured and counted: $\frac{1}{2}$ in. high by $\frac{7}{16}$ in. broad, 23 drupelets; $\frac{3}{8}$ in. by $\frac{5}{16}$ in., 10 drupelets; $\frac{7}{16}$ in. by $\frac{7}{16}$ in., 18 drupelets. Very edible.

Type stations: Moss's Corner and Old Fort Inn in Kennebunkport village, Maine. Also found at other places in the same village, at Cape Porpoise and forms of it at Old Orchard and in Wells. Open sun and light shade, dry ground.

This species is probably but one of a distinct class of blackberries more or less trailing, with angled stems and long narrow leaflets.

One form which is often quite prostrate with much shorter petiolules and is a very delicate-looking plant frequent throughout this section may be considered for the present as a variety and named described as

Var. delicatior, n. var. Plants glabrous and glandless, the new canes with smaller and fewer prickles, more decumbent, often entirely prostrate; leaflets smaller, shorter stalked and more delicate; the old canes with shorter new growth; the long branches or stemlets rarely over 1 ft. high with trifoliate not quinate leaves, and the shorter and terminal ones with a very slender axis and narrower leaflets.

Type found on the electric railroad 75 rods east of the Town House junction, Kennebunkport, and in the roads and fields about it. Frequent in Kennebunk, Kennebunkport and Wells. Dry ground in sun or light shade.

Westminster, Vermont.

SOME NEW OR LITTLE KNOWN CYPERACEAE OF EASTERN NORTH AMERICA.

M. L. Fernald.

(*Continued from page 167.*)

Carex setacea Dewey, var. **ambigua** (Barratt), n. comb. *C. vulpinoidea*, var. *ambigua* Barratt according to Boott, Ill. iii. 125, t. 406 (1862). *C. xanthocarpa* Bicknell, Bull. Torr. Bot. Club, xxiii. 22 (1896).

This plant was beautifully illustrated by Francis Boott from Connecticut specimens and there can be no question from the plate and notes of the identity of Barratt's *C. vulpinoidea*, var. *ambigua* with Mr. Bicknell's *C. xanthocarpa*. An abundant series of material in the herbarium of Chester Dewey of his own *C. setacea* and of Sartwell's *C. scabrior* shows that while the best *C. setacea* (including *scabrior*) has ordinarily dull brown or drab lanceolate or lance-ovate perigynia tapering gradually to the serrulate beak, many specimens pass very definitely either in color or in the outline of the perigynia to a commoner plant which in its best development has the broad-ovate to orbicular perigynia abruptly short-beaked and often golden-brown in color, the latter character suggesting the name *xanthocarpa*. The transitions between these two extremes are so numerous that it seems to the writer that they are best treated as phases of one plant rather than as distinct species.

Carex **Harperi**, n. sp. Similar to *C. leptalea* Wahl.: the capillary culms 2.5 to 7 dm. long; the more crowded spike with strongly overlapping linear-oblong perigynia (4 to 5 mm. long): the acuminate scales whitish: the achenes puncticulate, barely lustrous, sharply trigonous.— Georgia, springy place in swamp of Rocky Comfort Creek, near Louisville, Jefferson County, April 9, 1904 (*R. M. Harper*, no. 2109): Florida, without locality (*Chapman*); bogs and swamps, Apalachicola (*Chapman* in Biltmore Herb. no. 271b): Alabama, Gateswood, May 1, 1903 (*S. M. Tracy*, no. 8656): Mississippi, Coopolis, April 24, 1898 (*S. M. Tracy*, no. 4122): Louisiana, without locality (*Hale*): Texas, without locality (*Wright*).

C. leptalea is a common plant of northern cold swamps and bogs, extending form Newfoundland to British Columbia, south to Pennsylvania, the Great Lakes and Missouri, and in the mountains to

North Carolina, Colorado and Oregon. *C. Harperi*, on the other hand, is a plant of the southern coastal plain, which may be expected to extend along the coast or in the Mississippi Basin considerably north of its present known range. Its chief points of distinction, already enumerated, may be contrasted with those of *C. leptalea* as follows: the perigynia of *C. Harperi* are 4 to 5 mm. long and strongly overlapping, those of *C. leptalea* 2.5 to 3.5 mm. long and subalternate; the scales of *C. Harperi* are whitish and acuminate, those of *C. leptalea* brownish and mostly obtuse or obtusish; the achenes of *C. Harperi* puncticulate, barely lustrous, and sharply angled, those of *C. leptalea* lustrous, not puncticulate, and obtusely angled.

Carex virescens Muhl. "in lit." was published almost simultaneously and with essentially identical descriptions by Willdenow [1] and by Schkuhr,[2] each citing the other's publication. From their descriptions "spica androgyna lineari pedunculata inferne mascula, femineis subapproximatis binis subpedunculatis linearibus,.... fructibus globoso-triquetris obtusis pubescentibus.... Capsulae *maturae virides subnervosae pubescentes*," and from the detailed drawing of the plant in Schkuhr's work there is no question of the plant Muhlenberg had in hand.

There are two extreme variations of *Carex virescens*. One has 2 to 4 linear-cylindric spikes, 2 to 4 mm. thick, the terminal one (including the staminate base) 1.8 to 4 cm. long, and from $\frac{1}{10}$ to $\frac{1}{7}$ as thick. The other has 2 to 5 oblong-cylindric to subglobose spikes 3 to 5 mm. thick, the terminal one 9 to 18 mm. long and from $\frac{1}{5}$ to $\frac{1}{3}$ as thick. The perigynia of the slender-spiked plant are somewhat costate, of the thicker spiked plant less so, or nearly nerveless. These two plants are ordinarily well marked but numerous transitional specimens show them to be varieties of one species, and they are usually so treated though by some authors they are accepted as distinct species: the shorter- and thicker-spiked plant as *C. virescens*, the longer- and slender-spiked plant as var. *costata* Dewey (*C. costellata* Britton). With the exception of Dewey, the earlier students of American Carices — Torrey, Carey, Boott, and others — made no strong distinction between the plants, though Boott, in his Illustrations, recognized the

[1] Willd. Sp. iv. 251 (1805).

[2] Schkuhr, Riedgr. Nachtr. 45, t. Mmm. fig. 147 (1806).

slender-spiked plant as true *C. virescens* illustrating that plant in full, and showing as an extreme form the inflorescence of the thicker-spiked plant. Subsequent authors, on the other hand, have followed the lead of Dewey in treating as true *C. virescens* the short-spiked plant, while the plant with elongate linear-cylindric spikes has been regarded as a variety (var. *costata* Dewey) or as a species (*C. costellata* Britton). It needs only a brief examination of the original description and figures, however, to show that in so doing, recent authors have treated the wrong plant as *C. virescens;* and that the plant of Muhlenberg, beautifully illustrated by Schkuhr, was the long-spiked extreme which is now passing as *C. virescens*, var. *costata* Dewey, or *C. costellata* Britton. The other, the short-spiked plant, which is one of the commonest and most attractive sedges of New England, is apparently without a name, and in recognition of the long and painstaking study of the group by the scholarly New England botanist, Charles Walter Swan, it may appropriately be called

C. VIRESCENS, var. **Swanii**, n. var. Usually lower than the species, 1.5 to 8 dm. high: the 2 to 5 oblong-cylindric to subglobose spikes 3–5 mm. thick; the terminal one (including the staminate base) 9 to 18 mm. long, $\frac{1}{5}$ to $\frac{1}{3}$ as thick.— *C. virescens* of recent authors.— Dry banks and copses, southern Maine to Ontario and southward. M. A. Day's no. 202 from Manchester, Vermont, may stand as the type of this variety.

CAREX LAXICULMIS Schwein., var. **copulata** (Bailey), n. comb. *C. retrocurva*, var. *copulata* Bailey, Herb. distr. no. 161 (1886). *C. digitalis*, var. *copulata* Bailey, Mem. Torr. Bot. Club, i. 47 (1889).

This variety as first designated by Professor Bailey on the label of his no. 161, from Lansing, Michigan, in 1886 was supposed to include "all our western plants" of the *digitalis-laxiculmis* (*retrocurva*) group. The particular plant (no. 161) in question was greener than most of the *C. laxiculmis* (*retrocurva*) of the coastal states and this point was strongly emphasized by Professor Bailey, who later, on account of the green not glaucous foliage of the plant transferred it to varietal rank under *C. digitalis*. Subsequent collections show that the plant may sometimes be glaucous,— as for example, material in the Gray Herbarium from Alma, Michigan, Erie County, Ohio, Port Stanley, Port Dover and Leamington, Ontario; — and specimens of what is in all other points typical *C. laxiculmis* of the Atlantic States,— from Waverly and Jamaica Plain, Massachusetts — show that the eastern

plant is not always glaucous. In fact the glaucous or non-glaucous foliage is not a satisfactory basis for the separation of *C. laxiculmis* and *C. digitalis*. The basal leaves, however, seem to furnish a very accessible character, a large series of *C. digitalis* having the basal leaves from 2 to 5 mm. broad, while an equally full representation of *C. laxiculmis* shows the basal leaves to vary in breadth from 6 to 12 mm. The western tendency of this species differs from the coastal plant, however, in a character which seems to be fairly constant in the material at hand. True *C. laxiculmis*, which occurs from southern Maine to Virginia and Missouri, principally in the coastal states, has perigynia 2.8 to 3 mm. long. The more characteristic plant of the interior, which may well retain the varietal name, *copulata*, first applied to an extreme specimen from Michigan, occurs from the Champlain Valley in Vermont to Delaware and west to Ohio, Michigan and Ontario, and has the perigynia distinctly larger, 3.3 to 4 mm. long.

Carex laxiflora Lam., var. **leptonervia**, n. var. Slender, 1.5 to 7 dm. high: leaves 0.5 to 1 cm. broad: pistillate spikes linear-cylindric, loosely-flowered, 1 to 2.5 cm. long; the 2 or 3 upper crowded at the base of the staminate; the lower remote: perigynia oblong-fusiform, nerveless or with 1 to 3 faint nerves on each face.— Newfoundland to Ontario, south to northern and central New England, central New York, and Minnesota and along the mountains to North Carolina and Tennessee. A northern extreme of the species differing from all the other varieties of *C. laxiflora* in its nerveless or only slightly nerved perigynia. The following from among very numerous specimens examined are characteristic. Newfoundland, Birchy Cove, Bay of Islands, June 22, 1895 (*A. C. Waghorne*, no. 8): Quebec, Allen's Ravine, Mt. Albert, Gaspé Co., August, 1905 (*J. F. Collins & M. L. Fernald*): Nova Scotia, Boylston, July, 1890 (*C. A. Hamilton*): Maine, low woods, Fort Fairfield, July 6, 1893 — type (*M. L. Fernald*, no. 146): New Hampshire, Mt. Washington, altitude 3500 feet, July 9, 1888 (*E. & C. E. Faxon*): Vermont, low open woods, New Haven, June 5, 1898 (*E. Brainerd*): Massachusetts, Shirley (*W. P. Conant*): Connecticut, sphagnum bog, Winchester, June 25, 1901 (*C. H. Bissell*): New York, Pickerel Pond, near Axton, June 29, 1899 (*Rowlee, Wiegand & Hastings*); Penn Yan, 1862 (*Sartwell*): Ontario, Niagara, May 14, 1901 (*J. Macoun*, no. 33,697): Minnesota, Two Harbors, June, 1893 (*E. P. Sheldon*): North Carolina, thickets, Waynesville, June 9, 1897 (Biltmore Herb. no. 1796a): Tennessee, on the higher regions of the Smoky Mts., May, 1844 (*F. Rugel*, no. 103).

(*To be continued.*)

A New Variety of Carex trisperma.— During the recent meeting of the Josselyn Botanical Society of Maine at Rowe Ponds Camps a party, including Edward B. Chamberlain, John Murdoch, Jr., Robert A. Ware, and myself with Sam Rollins as guide, visited Jewett Brook Bog, some distance below Jewett Pond of which it forms a part of the outlet. While on this trip a peculiar little sedge, growing at the foot of a small shrub in Sphagnum moss in the direct sunlight, attracted my attention. The setaceous or filiform appearance of the foliage and the very few scattered perigynia, mostly only one to a spikelet and not more than two spikelets to a plant, made its appearance very distinct from any other Carex with which I was acquainted. Other small clusters of the plant were collected in similar situations, and finally specimens were seen showing all stages of transition to typical *Carex trisperma* which grew abundantly some distance back under the trees, thus showing conclusively that the plant in question was only a very distinct form of *Carex trisperma*.

It seems fitting that this new variety should be recognized by a name, and I propose to dedicate it to one who has been my companion on many a woodland tramp, one who has shown the greatest enthusiasm in seeking to increase our knowledge of the occurrence and distribution of the plants of the Penobscot Valley, and whose persistent seeking has resulted in many additions to the flora of this region. It is with great pleasure on my part that opportunity is given me to name this new plant for my friend, Mr. Francis M. Billings, of Bangor. I would therefore call it.

Carex trisperma Dewey, var. **Billingsii**, new var.

Culms filiform, 1 to 2 dm. long; leaves 0.3 to 0.5 mm. wide, usually much overtopping the culm; spikelets one or two in number, usually one- but sometimes two-flowered; the finely many-nerved perigynia from 2.5 to 3.3 mm. long, 1.6 to 1.8 mm. broad, exceeding the scale by one-fourth to one-third its length. Habitat — Sunny spots in a mossy bog, Jewett Brook Bog, about a mile below Jewett Pond, (presumably in Pleasant Ridge Plantation) Maine, collected July 5, 1906 (*Chamberlain, Murdoch, Rollins, Ware & Knight*); type No. 5066 O. W. K.— O. W. Knight, Bangor, Maine.

THE PERIANTH OF RYNCHOSPORA CAPILLACEA VAR. LEVISETA.

E. J. Hill.

In Rhodora for July, 1906, p. 130, there is a statement in Prof. Fernald's article on some *Cyperaceae* that does not agree with my experience with *Rynchospora capillacea* var. *leviseta*. Mentioning *Cyperaceae* without bristles it states: "In a few regions, the Kennebec Valley, Maine, Lake County, Indiana, etc., *Rynchospora capillacea* consistently lacks the perianth and is var. *leviseta* Hill." Reference is also made to a previous article in Rhodora iii. 250 (1901), where the statement occurs: "In *Rynchospora capillacea* var. *leviseta* the reduced bristles lack the barbellate character found in otherwise undistinguishable spikes." Never having noticed this lack, or reduction of perianth I was a little surprised. Although I had examined a great many specimens at various times in order if possible to find some with barbed bristles, the absence or reduction of the perianth had never been remarked in plants collected about Lake Michigan. To see if I had overlooked the matter, after reading the article I went over my collections, taking various spikelets from different sheets to see how they fared in this respect. They had been carefully scrutinized at the time of collecting for smoothness of bristles.

My collections from Lake County, Ind., are six, three from Pine, the original locality, made in 1875, 1876 and 1880; two from Whiting, made in 1880 and 1881, and one from Edgemoor, 1881. The area it frequents here has not proved to be large, the extremes about six miles apart. North of Chicago, in Lake County, Ill., I have made three collections, two at Wauconda, made in 1898 and 1903, and one from Waukegan, 1905. I have a single plant found with the barbellate form at Brownstown on Grand Traverse Bay, Michigan. All the stations are less than a mile from Lake Michigan except Wauconda about seventeen miles west of Waukegan, where the plant grows by Bangs Lake, which is tributary to Fox River, and therefore in the basin of the Mississippi. These comprise all the stations where I have seen it. They mostly show myriads of examples, since the plants usually grow in dense masses. But in those which lie west of Lake Michigan I have not yet found a case with barbed bristles. Having

found one of the smooth bristled forms among the barbed at Brownstown naturally led to expect the reverse, which may yet be the case. The plants kept for the herbarium by no means comprise all cases of examination, since I have been frequently over ground where some of them grow and have tested them for the purpose of discerning any change in character. I have also collected or examined the barbellate form from three localities in Michigan, all contiguous to Lake Michigan; Petoskey and Brownstown in 1878, and Benton Harbor, 1895. Both the typical form and the variety occur in other parts of the state, as recorded in Beal's Michigan Flora.

What now do these collections show with regard to the lack of perianth or its reduction. There are generally from 2 to 6 akenes in a spikelet, mostly 4 or 5. I have met with but one akene without a perianth, and that in a spikelet where the rest were provided with one. The number of bristles when counted was so uniformly six that I ceased at length counting in all cases, but noted the length in both smooth and barbellate forms. The length is apt to vary in the same akene, the difference being covered by the length of the tubercle, a bristle rarely falling short of its base or exceeding its tip. Nor could I discern any difference in this respect in the two forms. The arrest of development was limited to the barbs. Though I am necessarily confined to my herbarium for the data regarding the number and length of bristles, it does not follow with respect to their absence, since in cases examined and not preserved the lack of a perianth would have been noticed, as it would have removed the crucial test for the variety.

Perhaps so small a matter hardly deserved so full a treatment, but it has a taxonomic value on the constancy of a varietal character, more so than many by which species are delimited. The specimens taken in different years from the same locality and from the various localities themselves prove this for the plants as they occur about the head of Lake Michigan. For the thirty years it has been under observation it comes true to seed, whatever may be its variations elsewhere.

Chicago, Ill.

Habenaria macrophylla in Maine.— Mr. Ames in his recent article (Cf. Ames, Rhodora, Jan. 1906, pp. 1–5) in which he so clearly distinguishes *Habenaria macrophylla* Goldie from *Habenaria orbiculata* Torrey does not seem to have data of the occurrence of *H. macrophylla* in Maine. While Mr. F. M. Billings and the writer were on a recent trip he found two plants of this species growing in low rich evergreen woods, which are now in my herbarium. (No. 5124, Herb. O. W. K., Bucksport, Maine, July 21, 1906, *Billings & Knight*). The species however had been previously collected in Maine as examination of the collection of Maine plants at the University of Maine shows a typical specimen collected in "Rich woods, Monmouth, July 31, 1897, by E. D. Merrill."

In this connection it may be well to state that I have recently seen specimens of *H. orbiculata* in the herbarium of the University of Maine, from Oldtown and Harrison and have it in my own possession from Holden and Sebois. There seems to be no doubt that both species are widely distributed in the State.— Ora W. Knight, Bangor, Maine.

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